





# Environment Setup Guide

Visual Studio: <https://visualstudio.microsoft.com/>






Download and install the corresponding Visual Studio according to your operating system:

- Visual Studio for Mac (macOS)
- Visual Studio Community 2022 (Windows)
  - When you install VS2022, check the following tools :

## Web & Cloud (4)

 <b>ASP.NET and web development</b> Build web applications using ASP.NET Core, ASP.NET, HTML/JavaScript, and Containers including Docker supp...	 <b>Azure development</b> Azure SDKs, tools, and projects for developing cloud apps and creating resources using .NET and .NET Framework...
 <b>Python development</b> Editing, debugging, interactive development and source control for Python.	 <b>Node.js development</b> Build scalable network applications using Node.js, an asynchronous event-driven JavaScript runtime.

## Other Toolsets (5)

 <b>Data storage and processing</b> Connect, develop, and test data solutions with SQL Server, Azure Data Lake, or Hadoop.	 <b>Data science and analytical applications</b> Languages and tooling for creating data science applications, including Python and F#.
 <b>Visual Studio extension development</b> Create add-ons and extensions for Visual Studio, including new commands, code analyzers and tool windows.	 <b>Office/SharePoint development</b> Create Office and SharePoint add-ins, SharePoint solutions, and VSTO add-ins using C#, VB, and JavaScript.
 <b>Linux and embedded development with C++</b> Create and debug applications running in a Linux environment or on an embedded device.	

# SQL Server Management Studio(SSMS)

SSMS will **NOT** work on Mac, if you are using macOS feel free to skip this part, and go directly to **SQL Server Installation (macOS version)**

## 1. Download and install SSMS 18.12.1

<https://learn.microsoft.com/en-us/sql/ssms/download-sql-server-management-studio-ssms?view=sql-server-ver16>

## Download SSMS

To download SSMS 19 Preview 3, visit [Download SSMS 19](#).

↓ [Free Download for SQL Server Management Studio \(SSMS\) 18.12.1](#)

SSMS 18.12.1 is the latest general availability (GA) version. If you have a previous GA version of SSMS 18 installed, installing SSMS 18.12.1 upgrades it to 18.12.1.

- Release number: 18.12.1
- Build number: 15.0.18424.0
- Release date: June 21, 2022

By using SQL Server Management Studio, you agree to its [license terms](#) and [privacy statement](#). If you have comments or suggestions, or you want to report issues, the best way to contact the SSMS team is at [SQL Server user feedback](#).

# SQL Server Installation (Windows version)

## 1. Download docker desktop and open it

<https://www.docker.com/>

## 2. In command prompt, pull mssql image 2019

```
docker pull mcr.microsoft.com/mssql/server:2019-latest
```

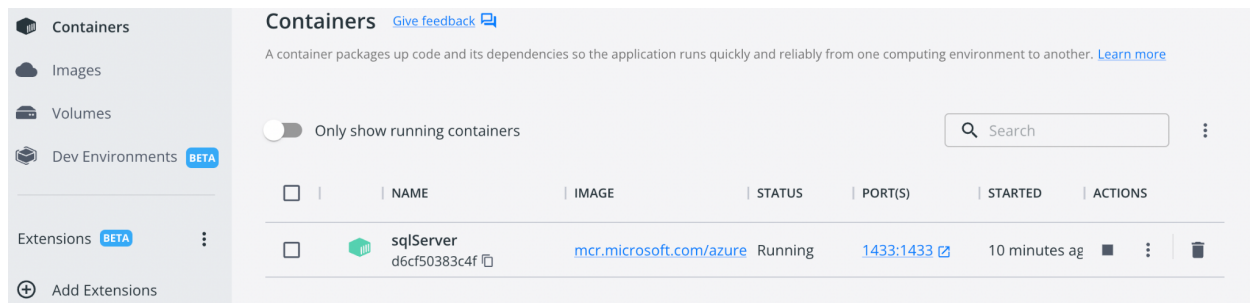
## 3. In command prompt, run docker image

```
docker run -e "ACCEPT_EULA=Y" -e "MSSQL_SA_PASSWORD=yourStrong(!)Password" -e  
"MSSQL_PID=Express" -p 1433:1433 -d --name=sqlServer  
mcr.microsoft.com/mssql/server:2019-latest
```

#you need to change **yourStrong(!)Password** to your own password

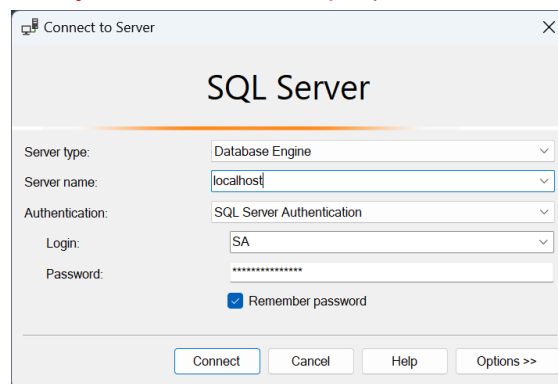
#if success, it will return a container id

## 4. Open Docker Dashboard and check the Containers tab, you can see your sql server container is running (you can also run `docker ps` in Command Prompt to check the status of the container)



*From now on, you can use the button on the docker desktop to start or stop the SQL Server container. If you use the command line to do so, all your data will be removed!!*

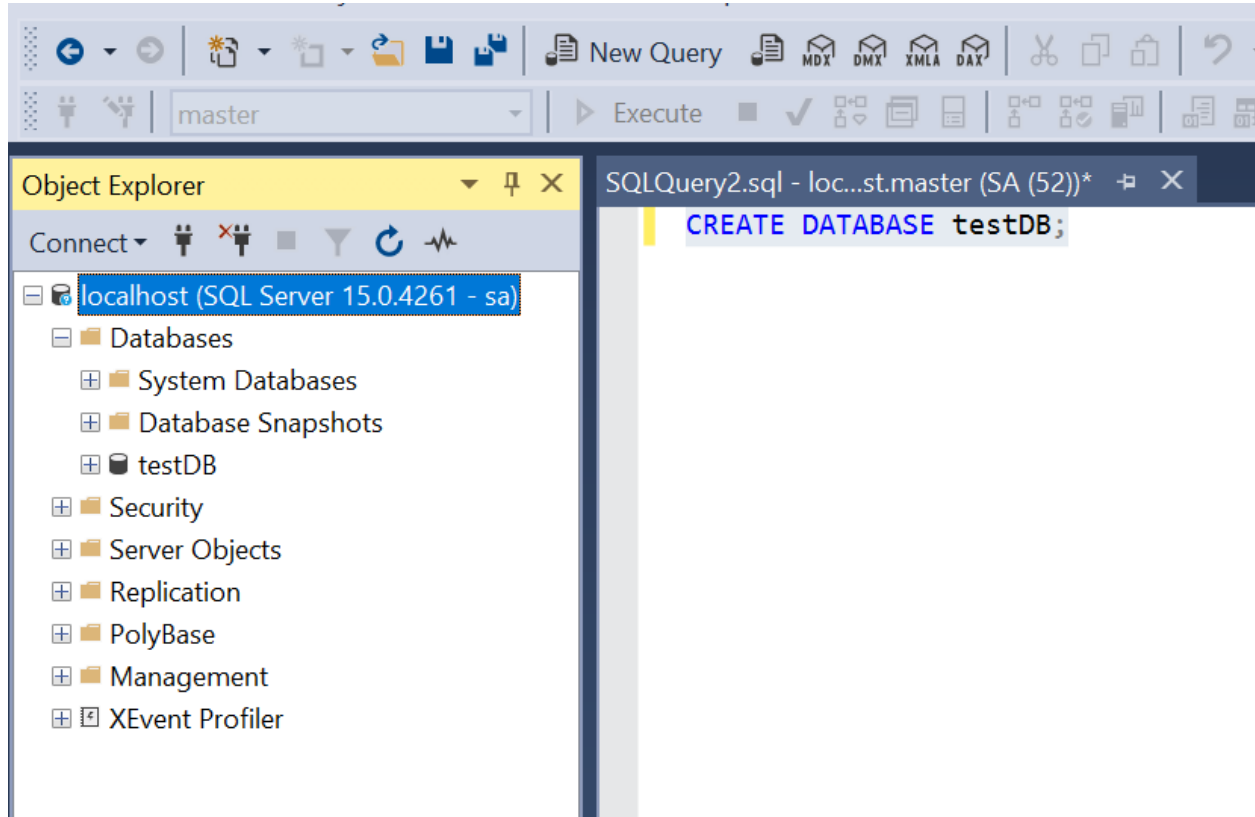
## 5. Open your SSMS and connect to SQL Server (The username should be SA, the password should be the one you created in step 3)



**6. Click New Query(or Ctrl + N) → Create a test database with the following query**

```
CREATE DATABASE testDB;
```

When you see the "Commands completed successfully" message, refresh the server and see if the new test database is there. → Congratulations, you are all done!



# SQL Server Installation (macOS version)

## 1. Install Docker Desktop

<https://www.docker.com/>

## 2. Install Azure Data Studio and Move your Azure Data Studio to the Application folder

<https://learn.microsoft.com/en-us/sql/azure-data-studio/download-azure-data-studio?view=sql-server-ver16>

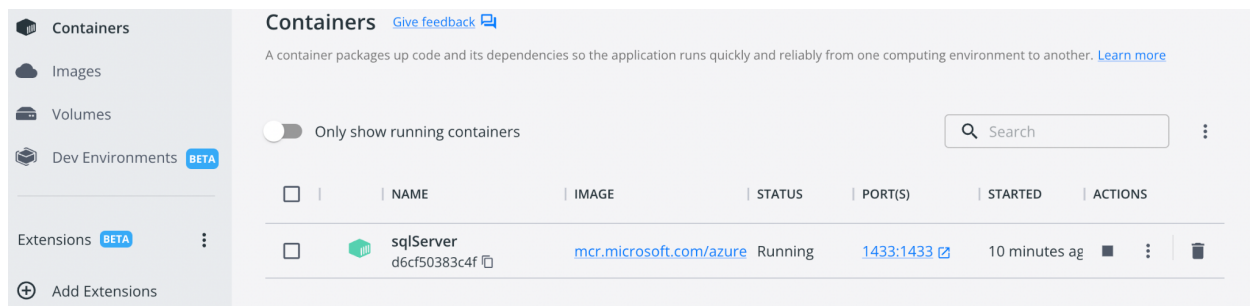
## 3. Open terminal and run the following command

#you need to change **YourPassword** to your own password

```
docker run -e "ACCEPT_EULA=1" -e "MSSQL_SA_PASSWORD=YourPassword" -e "MSSQL_PID=Developer" -e "MSSQL_USER=SA" -p 1433:1433 -d --name=sqlServer mcr.microsoft.com/azure-sql-edge
```

# It takes some time to pull the image, and when it's all done, it will return the Digest and Status id

## 4. Open Docker Dashboard and check the Containers tab, you can see your sql server container is running (you can also run `docker ps` in Terminal to check the status of the container)



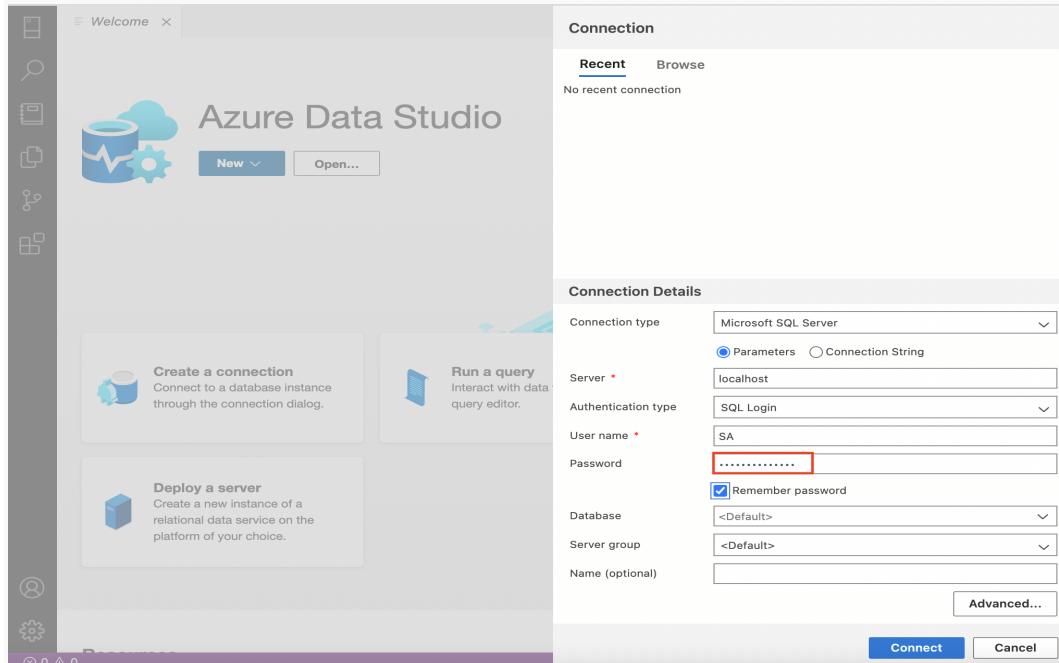
*From now on, you can use the button on the docker desktop to start or stop the SQL Server container. If you use the command line to do so, all your data will be removed!!*

## 5. Open Azure Data Studio (Please make sure you have the sqlServer container running on Docker)

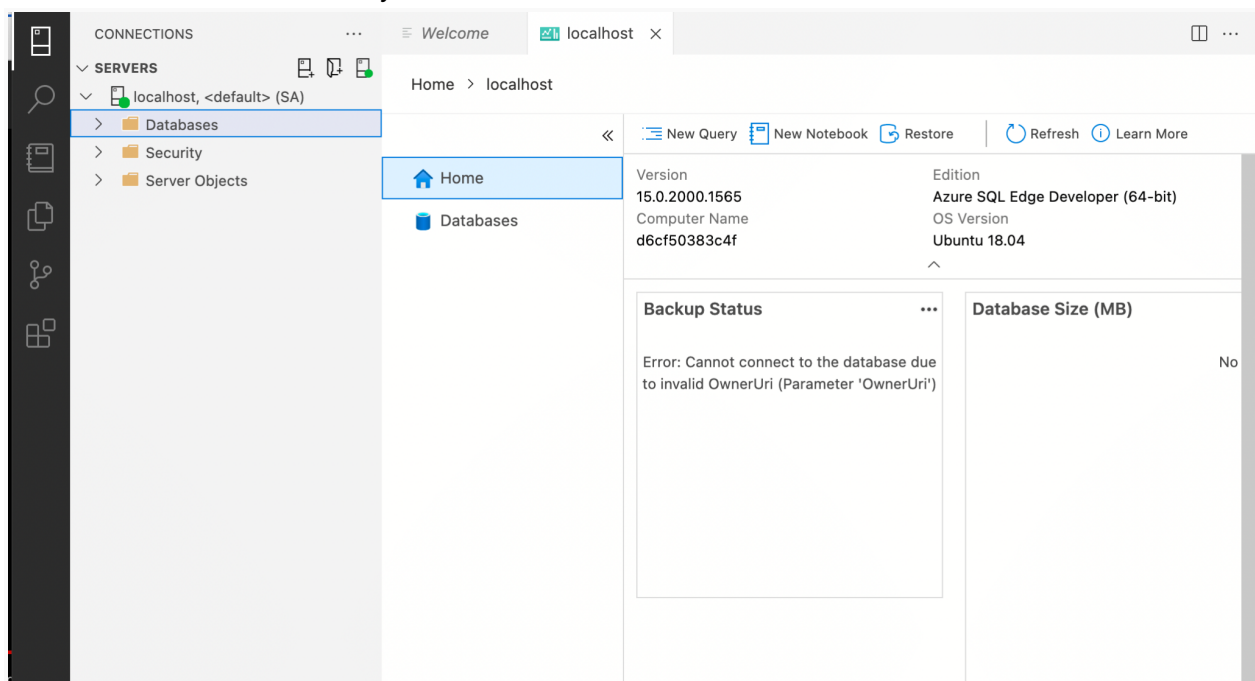
5.1 click on "Create a connection"

5.2 enter your information (The username should be SA, the password should be the one you created in step 3)

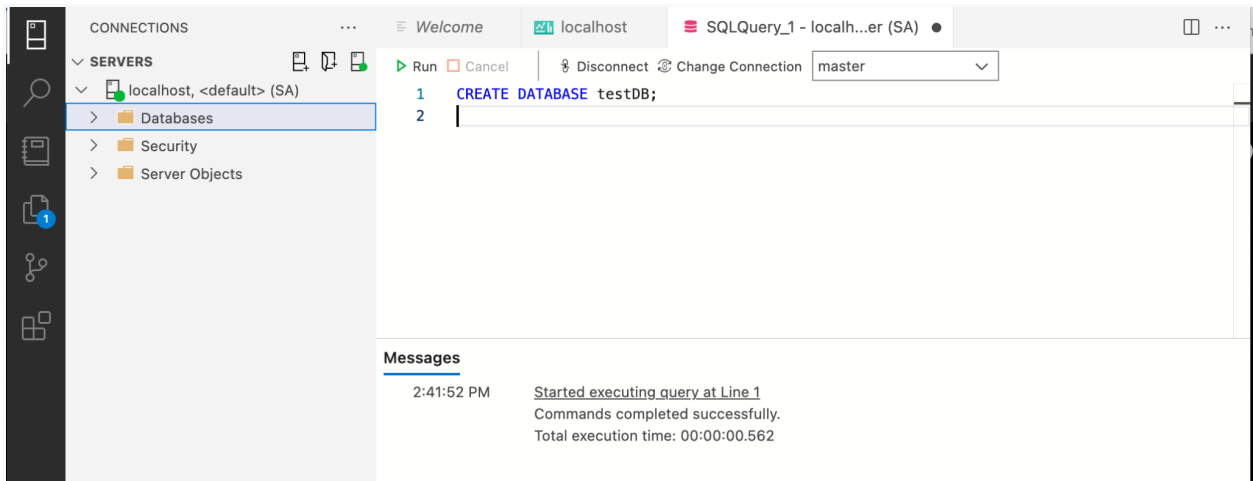
5.3 connect



## 5.4 click on "New Query" tab



### 5.5 create a testDB



5.6 refresh the server if you can see your testDB under your server, congratulations, you are all done

## Notes:

If you want to use sql server in the future, please run the docker container first, and then use SSMS or Azure Data Studio to connect and manipulate the database.

If you want to disconnect:

Disconnect from the SSMS/Azure Data Studio → Stop Docker Container → You're done!